

# UTAH STATE BULLETIN

*(With renewable energy tax credit rules for comments)  
Comment period ends 1 August 2007.*

OFFICIAL NOTICES OF UTAH STATE GOVERNMENT  
Filed June 2, 2007, 12:00 a.m. through June 15, 2007, 11:59 p.m.

Number 2007-13  
July 1, 2007

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The *Utah State Bulletin (Bulletin)* is an official noticing publication of the executive branch of Utah State Government. The Department of Administrative Services, Division of Administrative Rules produces the *Bulletin* under authority of Section 63-46a-10, *Utah Code Annotated* 1953.

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Division of Administrative Rules, Salt Lake City 84114

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Printed in the United States of America

**Library of Congress Cataloging-in-Publication Data**

Utah state bulletin.

Semimonthly.

1. Delegated legislation--Utah--Periodicals. 2. Administrative procedure--Utah--Periodicals.

I. Utah. Office of Administrative Rules.

KFU440.A73S7

348.792'025--DDC

85-643197

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(4) "Statistical agent" means an entity with proven systems for protecting the confidentiality of individual insured and insurer information; demonstrated resources for and history of ongoing electronic communications and data transfer ensuring data integrity with insurers, which are its members or subscribers; and a history of and means for aggregation of data and accurate promulgation of the experience modifications in a timely manner.

**R590-241-4. 2001 CSO Preferred Class Structure Table.**

At the election of the company, for each calendar year of issue, for any one or more specified plans of insurance and subject to satisfying the conditions stated in this rule, the 2001 CSO Preferred Class Structure Mortality Table may be substituted in place of the 2001 CSO Smoker or Nonsmoker Mortality Table as the minimum valuation standard for policies issued on or after January 1, 2007. No such election shall be made until the company demonstrates that at least 20% of the business to be valued on this table is in one or more of the preferred classes. A table from the 2001 CSO Preferred Class Structure Mortality Table used in place of a 2001 CSO Mortality Table, will be treated as part of the 2001 CSO Mortality Table only for purposes of reserve valuation.

**R590-241-5. Conditions.**

(1) For each plan of insurance with separate rates for Preferred and Standard Nonsmoker lives, an insurer may use the Super Preferred Nonsmoker, Preferred Nonsmoker, and Residual Standard Nonsmoker tables to substitute for the Nonsmoker mortality table found in the 2001 CSO Mortality Table to determine minimum reserves. At the time of election and annually thereafter, except for business valued under the Residual Standard Nonsmoker Table, the appointed actuary shall certify that:

(a) The present value of death benefits over the next ten years after the valuation date, using the anticipated mortality experience without recognition of mortality improvement beyond the valuation date for each class, is less than the present value of death benefits using the valuation basic table corresponding to the valuation table being used for that class.

(b) The present value of death benefits over the future life of the contracts, using anticipated mortality experience without recognition of mortality improvement beyond the valuation date for each class, is less than the present value of death benefits using the valuation basic table corresponding to the valuation table being used for that class.

(2) For each plan of insurance with separate rates for Preferred and Standard Smoker lives, an insurer may use the Preferred Smoker and Residual Standard Smoker tables to substitute for the Smoker mortality table found in the 2001 CSO Mortality Table to determine minimum reserves. At the time of election and annually thereafter, for business valued under the Preferred Smoker Table, the appointed actuary shall certify that:

(a) The present value of death benefits over the next ten years after the valuation date, using the anticipated mortality experience without recognition of mortality improvement beyond the valuation date for each class, is less than the present value of death benefits using the Preferred Smoker valuation basic table.

(b) The present value of death benefits over the future life of the contracts, using anticipated mortality experience without recognition of mortality improvement beyond the valuation date for each class, is less than the present value of death benefits using the Preferred Smoker valuation basic table.

(3) Unless exempted by the commissioner, every authorized

insurer using the 2001 CSO Preferred Class Structure Table shall annually file with the commissioner or, at the direction of the commissioner, with the NAIC or with a statistical agent designated by the NAIC and acceptable to the commissioner, statistical reports showing mortality and such other information as the commissioner may deem necessary or expedient for the administration of the provisions of this rule. The form of the reports shall be established by the commissioner or the commissioner may require the use of a form established by the NAIC or by a statistical agent designated by the NAIC and acceptable to the commissioner.

**R590-241-6. Severability.**

If any provision of this rule or its application to any person or circumstance is for any reason held to be invalid, the remainder of the rule and the application of the provision to other persons or circumstances shall not be affected.

**KEY: life insurance mortality tables**

**Date of Enactment or Last Substantive Amendment: 2007**

**Authorizing, and Implemented or Interpreted Law: 31A-2-201; 31A-17-402**



Natural Resources, Geological Survey  
**R638-2**  
Renewable Energy Systems Tax  
Credits

**NOTICE OF PROPOSED RULE**

(New Rule)

DAR FILE No.: 30103

FILED: 06/15/2007, 11:50

**RULE ANALYSIS**

PURPOSE OF THE RULE OR REASON FOR THE CHANGE: The proposed rule lays out requirements and procedures for claiming renewable energy tax credits under Sections 59-7-614, 59-10-1014, and 59-10-1106.

SUMMARY OF THE RULE OR CHANGE: Renewable energy tax credits expired on 12/31/2006. However, S.B. 223 in the 2007 General Session the legislature reauthorized the old credits and expanded eligibility for credits to new technologies (biomass, geothermal, and ground source heat pumps) and created a new category of credits (production tax credits). A rule is therefore needed for these new provisions. Existing rules for the pre-2007 credits are due to expire in October 2007. This rule is being posted as a new rule because the existing rules are assigned to an office that no longer exists (the Office of Energy and Resource Planning at the Department of Natural Resources). Moreover, experience with the existing rule shows substantial shortcomings and a substantial rewriting has taken place. (DAR NOTE: S.B. 223 (2007) is found at Chapter 288, Laws of Utah 2007, and will be effective 01/01/2008.)

STATE STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE: Sections 59-7-614, 59-10-1014, and 59-10-1106

## ANTICIPATED COST OR SAVINGS TO:

❖ **THE STATE BUDGET:** Because S.B. 223 expanded eligibility for tax credits, additional cost is expected to implement the new statutes. However, some savings are expected because of new requirements in the rule (in comparison to the prior rules) that should require less work by Utah Geological Survey (UGS) staff to document eligibility for the credits.

❖ **LOCAL GOVERNMENTS:** There may be a slight increase in cost to local governments due to requirements in some sections of the rule for inspection of renewable energy systems by qualified electricians, plumbers, engineers, or code inspectors. Local governments may choose to inspect systems if requested by tax credit applicants but are not required to inspect systems under this rule. Any costs incurred by local government are voluntary.

❖ **OTHER PERSONS:** The prior rules required that renewable energy systems for which credits were sought comply with applicable building, plumbing, and/or electrical codes. However, there was no requirement to demonstrate this compliance. The new rule requires inspections or certifications for safety and reliability of most systems. For the majority of applicants who have systems installed by contractors, this will involve no extra cost. However, a small number of applicants for credits have historically been "do-it-yourselfers". For these applicants, there may be added cost in hiring a qualified professional to inspect and approve a system. This requirement is important to ensure that the state is not providing tax credits for systems that may be dangerous or unreliable.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** Compliance costs for the large majority of applicants will be minimal. Most applicants for the tax credits have systems installed by contractors who typically provide most of the information that is necessary for approval of the credits. A small additional new cost may be incurred in the requirement for photographs of systems. For those who self-install systems, there may also be an additional new cost for inspection of a system by a qualified professional.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** There is little or no fiscal impact from this rule on businesses. Michael R. Styler, Executive Director

THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:

NATURAL RESOURCES  
GEOLOGICAL SURVEY  
Room 3110  
1594 W NORTH TEMPLE  
SALT LAKE CITY UT 84116-3154, or  
at the Division of Administrative Rules.

## DIRECT QUESTIONS REGARDING THIS RULE TO:

Philip Powlick at the above address, by phone at 801-537-3365, by FAX at 801-537-4795, or by Internet E-mail at philippowlick@utah.gov

INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS TO THE ADDRESS ABOVE NO LATER THAN 5:00 PM on 08/01/2007.

THIS RULE MAY BECOME EFFECTIVE ON: 09/01/2007

AUTHORIZED BY: Rick Allis, Director

**R638. Natural Resources, Geological Survey.****R638-2. Renewable Energy Systems Tax Credits.****R638-2-1. Purpose.**

(A) This rule implements the responsibilities assigned to the Utah Geological Survey (UGS) for the renewable energy systems tax credit programs established in Sections 59-7-614, 59-10-1014, and 59-10-1106.

(B) This rule establishes requirements for eligibility for renewable energy system tax credits and the criteria for determining the amount of such tax credits by defining eligible systems, eligible system components, eligible costs, and other requirements intended to ensure the safety and reliability of systems supported by tax credits, and to ensure the appropriate use of the state's energy and economic resources.

(C) This rule also establishes procedures for taxpayers to use when applying for UGS certification of tax credit eligibility and tax credit amounts, and for UGS to follow in reviewing such applications.

(D) This rule applies to all renewable energy systems installed or entering commercial service after January 1, 2007.

**R638-2-2. Authority.**

Pursuant to Sections 59-7-614, 59-10-1014, and 59-10-1106, the UGS and the Utah Tax Commission may each make rules that are necessary to implement renewable energy tax credits for corporate and individual income tax filers. In addition, UGS is required to certify that an energy system for which a tax credit is sought has been installed and is a viable system for saving or production of energy from renewable resources. For taxpayers claiming a tax credit based upon a percentage of the costs of a renewable energy system, the UGS may also set standards for residential and commercial systems that cover the safety, reliability, efficiency, leasing, and technical feasibility of the systems to ensure that they use the state's renewable and non-renewable energy resources in an appropriate and economic manner. For such percentage-of-cost credits, UGS may also establish rules defining the reasonable costs of a system.

**R638-2-3. Definitions.**

(A) The definitions below are in addition to or serve to clarify the definitions found in Sections 59-7-614, 59-10-1014, and 59-10-1106.

(B) "Active solar thermal system" means a system of apparatus and equipment capable of intercepting and transferring incident solar thermal radiation to air or liquid by a separate apparatus to the point of storage or use. Transfer of energy to the point of storage or use must be accomplished using a mechanically powered device.

1. Active solar thermal systems include systems that:

a. Heat water for space heating, culinary water, recreational use (including swimming pools), and other industrial or commercial uses;

b. Heat a liquid, contained within a closed loop system, whose transferred heat may be used for space heating, culinary water, recreational use (including swimming pools), and other industrial or commercial uses; and

c. Heat air that is transferred to a building's conditioned space using mechanical systems such as fans or blowers either for heat or to induce air movement used for cooling.

2. Active solar thermal systems do not include systems that use heat for evaporative cooling.

(C) "Biomass system" means a system of apparatus and equipment for use in converting biomass material into fuel or electricity and transporting that energy by separate apparatus to the point of use or storage.

1. Materials that may be used to produce fuel or electricity are as follows:

a. material from a plant or tree; or

b. other organic matter that is available on a renewable basis, including:

i. slash and brush from forests and woodlands;

ii. animal waste;

iii. methane produced at landfills or as a byproduct of the treatment of wastewater residuals;

iv. aquatic plants; and

v. agricultural products.

2. A biomass system does not include:

a. A system that uses, black liquor, treated woods, or biomass from municipal solid waste other than methane produced at landfills or sewage treatment plants

b. A system that combusts biomass for the primary purpose of producing and using heat or mechanical energy.

3. In order to be considered a biomass system, a fuel or electricity producing system must use biomass as its primary source of energy.

(D) "Commercial energy system" means any active solar, passive solar, geothermal electricity, direct-use geothermal, geothermal heat-pump system, wind, hydroenergy, or biomass system used to supply energy to a commercial unit or as a commercial enterprise. In the case of systems generating electricity and involving multiple but interconnected energy generation systems, a commercial energy system includes all interconnected components that:

1. Were assembled or constructed at approximately the same time as part of a single project; and

2. Supply electricity to a common grid interconnection point. This includes wind farms connecting to a single substation and biomass generating systems using multiple small generators. Such combinations of intertied generators are considered to be single energy systems for purposes of this rule.

(E) "Commercial tax credit" means the credits defined in Subsection 59-7-614(2)(b) and Section 59-10-1106 that provide tax credits worth 10% of the reasonable cost, up to \$50,000, of a commercial energy system.

(F) "Commercial unit" means any building or structure that a business entity uses to transact its business. For purposes of the commercial investment tax credit, an agricultural water pump and a wind turbine are each considered to be single commercial units.

(G) "Direct use geothermal system" means a system of apparatus and equipment enabling the direct use of thermal energy, generally between 100 and 300 degree Fahrenheit, that is contained in the earth to meet energy needs, including heating a building, an industrial process, or aquaculture. Such systems generally make use

of hot water or steam derived from wells bored through the earth's crust to reach areas of thermal energy. They may include systems that make use of groundwater or those that inject water into the earth for the purpose of deriving heat. They can also include systems that pump a heat exchanging fluid through a sealed, close loop system below the ground to extract heat for use above the earth's surface.

(H) "Eligible cost" means a cost that is reasonable as defined in this rule, that is incurred for the purchase or installation of a renewable energy system, and that may be used in computing the amount of either a commercial or residential investment tax credit.

(I) "Geothermal electricity system" means a system that uses thermal energy that flows outward from the earth as the sole source of energy for producing electricity.

(J) "Geothermal heat pump system" means a system of apparatus and equipment enabling use of the thermal properties contained in the earth well below 100 degrees Fahrenheit to help meet heating and cooling needs of a structure. For purposes of this rule, geothermal heat pump system means a system that is thermally coupled with the ground through a heat exchange medium or using mechanical heat exchange equipment and that uses a "ground-source heat pump" technology described in the American Society of Heating, Refrigerating, and Air Conditioning Engineers' (ASHRAE) Applications Handbook, Chapter 32. This can include ground source heat pumps and water source heat pumps using ground water or surface water.

(K) "Grid connected" describes a system that generates electricity and is electrically connected to an electrical load that is also connected to and served by the local utility's electrical grid. To be considered grid connected, a system needs be able to serve an electrical load that is also served by the local utility.

(L) "Heat transportation system" means all fans, vents, ducts, pipes and heat exchangers designed to move heat from a collection point to either the storage or heat use area.

(M) "Investment tax credit" means a tax credit authorized in any of the Sections 59-7-614, 59-10-1014, and 59-10-1106 and that is not a production tax credit.

(N) "Loaded structure" means a part of the building that provides support to that building.

(O) "Placed in commercial service" means the earliest point in time at which a commercial energy system:

1. Produces or is capable of producing at its maximum potential output; and

2. Sells all or some of its energy output or uses its energy output for commercial activities located at the same site.

(P) "Passive solar system" means a direct thermal system that utilizes the structure of a building and its operable components to provide for collection, storage, and distribution of heating or cooling during the appropriate times of the year by utilizing the climate resources available at the site and includes those portions and components of a building that are expressly designed and required for the collection, storage, and distribution of solar energy.

(Q) "Production tax credit" means the credits defined in Subsection 59-7-614(2)(c) that provides 0.35 cents per kilowatt-hour of electricity produced for wind, geothermal, or biomass systems with production capacities of 660 kilowatts or greater.

(R) "Production tax credit window" means the period during which a company is eligible to receive production tax credits for a specific commercial energy system. The window begins on the day that the system is placed in commercial service and ends 48 months after that date.

(S) "Renewable energy system" means any of the following

types of systems defined in Section 57-7-614, 57-10-1014, and 57-10-1106:

1. Active solar including solar thermal and photovoltaics;
2. Biomass except for systems combusting biomass for heat;
3. Direct-use geothermal;
4. Geothermal electricity
5. Geothermal heat pump;
6. Hydroenergy;
7. Passive solar for heating or cooling;
8. Wind.

(T) "Residential investment tax credit" means the credits defined in Subsection 59-7-614(2)(a) and Section 59-10-1014 that provide tax credits worth 25% of the reasonable cost up to \$2,000 of a residential energy system.

(U) "Residential unit" means any house, condominium, apartment, or similar dwelling for a person or persons, but it does not include any vehicles such as motor homes, recreational vehicles, or house boats.

(V) "Solar PV energy system" means an active solar energy system that converts light to direct current electricity through the use of semiconducting materials and that is capable of producing electricity for use in a building by the use of an inverter to produce alternating current electricity.

(W) "Thermal storage mass" means a structure within the conditioned space consisting of a material with high thermal capacitance or mass to provide heat to the unit at times of low or no heat collection.

(X) "Ton" means heating and/or air conditioning capacity equivalent to 12,000 British thermal units (Btus).

(Y) "USEP" means that Utah State Energy Program, a subdivision of the Utah Geological Survey, which is responsible for certifying tax credits specified under this rule.

(Z) "Wind energy system" means a system of apparatus and equipment capable of intercepting and converting wind energy into mechanical or electrical energy and transferring these forms of energy by a separate apparatus to the point of use, sale, or storage.

(AA) "Solar surface" is a building wall which faces no more than 30 degrees away from true south measured in a horizontal plane.

#### **R638-2-4. Investment Tax Credit Certification Process.**

(A) The Utah State Energy Program (USEP), a subdivision of the UGS, is responsible for certifying renewable energy systems tax credits.

(B) Applications for credits are to be made on forms developed by USEP to gather information necessary to implement this rule.

(C) USEP will evaluate each application according to the definitions and criteria established by statute and by this rule. If the information contained within an application is inadequate to determine eligibility according to this rule, USEP reserves the right to request additional information from the applicant. If an applicant is unable or unwilling to provide adequate information, USEP may deny the application and no tax credit will be certified.

(D) If, after evaluating an application, USEP finds that a renewable energy system is eligible for a residential or commercial tax credit, USEP will complete a Utah State Tax Commission Form TC-40E that will serve as the taxpayer's documentation of eligibility for a tax credit. Only USEP may issue a completed TC-40E and a tax credit may not be claimed without such documentation.

(E) Upon the completion of USEP's evaluation of an application, USEP will provide to the applicant one of the following,

as appropriate:

1. A completed TC-40E allowing the full amount of tax credit requested;

2. A completed TC-40E allowing a portion of the tax credit requested accompanied by a written explanation for the denial of the full requested amount; or

3. A letter informing the applicant that the request for a tax credit has been denied and providing an explanation for the denial.

(F) If USEP denies, in whole or in part, an application for a tax credit, the taxpayer applicant may, consistent with Section 63-46b-12 (Administrative Procedures Act), request that the decision be reviewed by the USEP manager. If, after review by the manager, the taxpayer desires a further appeal, he or she may request reconsideration of the decision by the director of UGS, consistent with Section 63-46b-13.

(G) All applications for credits under this rule shall provide the following information:

1. The true legal name of the person or persons seeking a tax credit;

2. The tax identification number or numbers of persons seeking a tax credit;

3. The physical address, plat number, or global positioning satellite (GPS) coordinates of the property where the system is installed. Location information must be sufficient to permit USEP staff to locate the site for on-site verification of the information in the application.

4. A general description of the system, including technologies employed (e.g. wind, solar thermal), intended use, energy production capacity, cost, date of completed installation, and other information specified in this rule.

(H) Applications for a residential and commercial tax credits must provide, either within an application form or provided as supporting documentation, each of the following:

1. Detailed diagrams of the system installed such that SEP staff, evaluating each proposal, can distinguish all major system components, how the system operates, and which components are eligible costs for computing the tax credit.

2. Photographs or copies of photographs that show major system components, how and where the system is installed, electrical interconnections with the power grid or other components of the electrical system at the taxpayer's home or business, and any other components of the renewable energy system that demonstrate that individual components are eligible costs under this rule. Photographs or copies of photographs should also demonstrate that a system is constructed in a safe and reliable manner.

3. Clear documentation of costs incurred for all components of the renewable energy system. Original or reproduced copies of all receipts or invoices should be provided and all invoices from contractors or equipment dealers must show that the invoiced amounts were paid by the taxpayer; otherwise, copies of canceled checks should be provided. Documentation should also include an itemized listing of all components of an installed system, including manufacturer and model numbers for major equipment components, the costs of all major components, and costs for labor, installation, and/or design. The sum of documentation provided should be sufficient to allow UGS to identify all eligible and ineligible costs and to determine whether such costs are reasonable. Applications that do not include a clear itemization of system costs will not be considered.

#### **R638-2-5. Investment Tax Credit, Eligible Costs for**

**Commercial and Residential Systems, General.**

(A) Taxpayers applying for commercial investment tax credits are entitled to credits equal to 10% of the eligible costs of a renewable energy system up to a maximum of \$50,000 for a commercial unit. This limit applies to the lifetime of the commercial unit. Taxpayers may apply for multiple credits for additional renewable energy systems or for expansions to the capacity of existing systems for the same commercial unit, however, the total of all credits awarded may not exceed \$50,000 for any single commercial unit.

(B) Taxpayers applying for residential investment tax credits are entitled to credits equal to 25% of the eligible costs of a renewable energy system up to a maximum of \$2,000 for a residential unit. This limit applies to the lifetime of the residential unit. Taxpayers may apply for multiple credits for additional renewable energy systems or for expansions to the capacity of existing systems for the same commercial unit, however, the total of all credits awarded may not exceed \$2,000.

(C) Eligible costs for equipment are generally limited to system components that are both:

1. Necessary for the renewable energy system to produce energy and to deliver that energy for end-use; and
2. Are not system components that would be used for a conventional energy system fulfilling a similar role in delivering energy for end-use.

(D) Eligible costs for equipment are limited to new components only. Any component of the renewable energy system that has previously been used for any purpose is ineligible.

(E) Costs for equipment and installation of components on existing renewable energy systems are eligible only to the extent that the additional equipment increases the energy production capacity of the existing system. Costs for repair or replacement of any component of an existing system are ineligible for a tax credit.

(F) All major energy-producing, energy conversion, and energy storage components of a renewable energy system shall be commercially available and purpose-built or manufactured for the intended application. Major components built from equipment not manufactured or built primarily for the purpose of generating renewable energy are not eligible unless it can be demonstrated that the component is necessary to the system and that no commercially available, purpose-built or manufactured equivalent is available.

(G) Energy storage devices, and equipment for regulating energy storage, for renewable energy systems that produce electricity are not considered to be eligible costs when used at a residential or commercial unit that is either:

1. Connected to the electrical grid; or
2. Within the service territory of a retail electricity provider and is less than one-quarter mile from an electrical distribution line.

(H) Costs for the installation of a renewable energy system are eligible. Labor costs for installation are eligible so long as the taxpayer has paid a qualified installer or other contractor for services. Costs that may be claimed for the estimated value of a taxpayer's own labor are not considered to be eligible.

(I) Equipment and installation costs for backup energy production devices and any other energy production equipment that does not make use of a renewable energy source are not considered to be eligible costs.

(J) Costs for the design of a renewable energy system are generally eligible. However, in instances where design costs of a renewable energy system are included within the costs of a larger project (e.g. the design of a complete building), only the component

of design costs specifically attributable to the design of the renewable energy system are eligible. Claims for design costs that do not separate eligible from ineligible costs will be deemed ineligible.

(K) Any portion of the cost of an eligible renewable energy system that is offset by a cash rebate from a manufacturer, vendor, installer, utility, or any other type of rebate shall be not be considered an eligible cost for the purpose of calculating residential or commercial tax credits. For purposes of this rule, utility rebates in the form of credits against bills are considered to be cash rebates and should be deducted from eligible costs. However, the amount of any federal tax credit received for an eligible system will not be deducted from the eligible cost when calculating the amount of Utah tax credits.

(L) USEP may, at its discretion, conduct an on-site inspection of a system applying for a commercial or residential tax credit. Applications for renewable energy systems that are found not to be in compliance with this rule or that are a variance with information provided in a tax credit application may be denied or the amount of the tax credit altered.

(M) Some renewable energy technologies have additional requirements for eligible costs that may be found in technology-specific sections of this rule, below.

**R638-2-6. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Active Solar Thermal.**

(A) All eligible costs for active solar thermal energy systems must conform with Section R638-2-5, above. Active solar thermal energy systems must also meet the requirements in this Section.

(B) For purposes of determining eligible costs, an active solar thermal system ends at the interface between it and the conventional heating system. Eligible costs for a solar thermal system are limited to components that would not normally be associated with a conventional hot water heating system. Eligible equipment costs include:

1. Solar collectors that transfer solar heat to water, a heat transfer fluid, or air;
2. Thermal storage devices such as tanks or heat sinks;
3. Ductwork, piping, fans, pumps and controls that move heat directly from solar collectors to storage or to the interface between the active solar thermal system and a buildings conventional heating and cooling systems.

(C) Hot water storage tanks that have dual heat exchange capabilities allowing for the heating of water by both the active solar thermal system and by a nonrenewable energy source such as natural gas or electricity are eligible for tax credits. However only one half of the costs of purchasing and installing such tanks are eligible costs for the purposes of calculating a commercial or residential tax credit.

(D) In order to be eligible for residential or commercial tax credits, a solar collector that heats water must be certified and rated by the Solar Rating Certification Corporation (SRCC) according to SRCC Standard 100, "Test Methods and Minimum Standards for Certifying Solar Collectors."

(E) In order to be eligible for residential or commercial tax credits, an active solar thermal system installed after December 31, 2008 and that heats water must be certified and rated by the Solar Rating Certification Corporation (SRCC) according to SRCC Document OG-300, "Operating Guidelines and Minimum Standards for Certifying Solar Water Heating Systems."

(F) In order to be eligible for a residential or commercial tax credit, the taxpayer applicant must demonstrate that a solar thermal

energy system has been sited and installed appropriately in order to realize the maximum feasible energy efficiency for a given location. Specifically, the system should conform with the following:

1. Solar collectors shall be free of shade (vent pipes, trees, chimneys, etc.) and positioned accordingly so as to optimize the average annual solar radiation values (kWh/M<sup>2</sup>/day). Guidance for siting may be found at the National Renewable Energy Laboratory's (NREL) National Solar Radiation Database, which can be found at: <http://rredc.nrel.gov/solar/pubs/redbook/PDFs/UT.PDF>;

2. Collector tilt for fixed collectors shall be angled no greater than +/-15 degrees from the energy system site's geographic latitude;

3. Fixed collectors shall be oriented within 15 degrees of true south.

(G) In order to be eligible for a residential or commercial tax credit, all solar hot water thermal systems shall be installed by one of the following licensed contractors:

1. A Utah licensed plumbing contractor (S210 license);

2. A Utah licensed solar hot water contractor (S215 license); or

3. A licensed contractor who has obtained written approval by the Utah Department of Occupational Licensing for the installation of solar hot water systems.

(H) In order to be eligible for a residential or commercial tax credit, an active solar thermal system must be certified for safety by one of the following:

1. A Utah licensed plumbing contractor (S210 license);

2. A Utah licensed solar hot water contractor (S215 license); or

3. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required on the tax credit application.

(I) For purposes of computing eligible costs for residential and commercial tax credits, the reasonable cost of a flat panel active solar thermal system is considered to be no higher than \$0.15 per Btu/day of heat output for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility). The determination of heat output shall be based upon the ratings of the Solar Rating Certification Corporation (SRCC) "Summary of SRCC Certified Solar Collectors and Water Heating System Ratings" that is found at: <http://www.solar-rating.org/ratings/ratings.htm>.

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$0.15 per Btu/day of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = (( $\$0.15 \times$  rated output capacity in Btu/day) - rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$0.15 per Btu/day, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = (( $\$0.15 \times$  rated output capacity in Btu/day) - rebates) x 0.10

3. If the cost of a flat panel active solar thermal system exceeds \$0.15 per Btu/day of capacity due to unusual and/or unavoidable circumstances (such as a multi-story structure retrofit or difficult pipe chase and interconnection conditions) the taxpayer applicant may request that the reasonable cost limitation above be waived by USEP. In order to do so, the applicant must provide written documentation and explanation from the designer or installer of the system as to why the final system cost exceeded this limit. Granting of such a waiver will be at the discretion of USEP and UGS after investigation as to the validity of the waiver claim.

(J) For purposes of computing eligible costs for residential and

commercial tax credits, the reasonable cost of an evacuated tube active solar thermal system is considered to be no higher than \$0.27 per Btu/day of heat output for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility). The determination of heat output shall be based upon the ratings of the Solar Rating Certification Corporation (SRCC) "Summary of SRCC Certified Solar Collectors and Water Heating System Ratings" that is found at: <http://www.solar-rating.org/ratings/ratings.htm>.

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$0.27 per Btu/day of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = (( $\$0.27 \times$  rated output capacity in Btu/day) - rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$0.27 per Btu/day, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = (( $\$0.27 \times$  rated output capacity in Btu/day) - rebates) x 0.10

3. If the cost of a flat panel solar thermal system exceeds \$0.27 per Btu/day of capacity due to unusual and/or unavoidable circumstances (such as multi-story structure retrofit or difficult pipe chase and interconnection conditions) the taxpayer applicant may request that the reasonable cost limitation above be waived by USEP. In order to do so, the applicant must provide written documentation and explanation from the designer or installer of the system as to why the final system cost exceeded this limit. Granting of such a waiver will be at the discretion of USEP and UGS after investigation as to the validity of the waiver claim.

#### **R638-2-7. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Solar PV (Photovoltaic).**

(A) All eligible costs for solar PV energy systems must conform with Section R638-2-5, above. Solar PV energy systems must also meet the requirements in this Section.

(B) The costs of the following solar PV energy system components are eligible for residential or commercial tax credits:

1. Solar PV module(s);

2. Inverter;

3. Motors and other elements of a tracking array;

4. Mounting hardware;

5. Wiring and disconnects from modules to the inverter and from the inverter to the point of interconnection with the AC panel;

6. Lightning arrestors.

(C) The costs of additional components of solar PV energy systems are eligible for residential or commercial tax credits if the solar PV system is not grid connected and it provides electricity to a building or structure that is more than one quarter mile from a power distribution line operated by a retail electric utility provider. If these conditions are met, the following components are also eligible:

1. Batteries;

2. Battery wiring;

3. Charge controllers; and

4. Battery temperature sensors.

(D) The costs of solar PV modules are eligible for Utah tax credits only if they are:

1. Listed as eligible modules under the California Solar Initiative Program. A list of eligible modules may be found at the following site: [http://www.consumerenergycenter.org/cgi-bin/eligible\\_pvmodules.cgi](http://www.consumerenergycenter.org/cgi-bin/eligible_pvmodules.cgi); or

2. The applicant can demonstrate to USEP that the modules

meet standards that are equivalent to those of the California Solar Initiative Program as of calendar year 2007.

(E) For grid connected solar PV systems, the cost of inverters are eligible for Utah tax credits only if:

1. They are also listed as eligible modules under the California Solar Initiative Program. A list of eligible inverters may be found at the following site: [http://www.consumerenergycenter.org/cgi-bin/eligible\\_inverters.cgi](http://www.consumerenergycenter.org/cgi-bin/eligible_inverters.cgi); or

2. The applicant can demonstrate to USEP that the inverter meets standards that are equivalent to those of the California Solar Initiative Program as of calendar year 2007.

(F) Solar PV modules must be certified for safety by a Nationally Recognized Testing Laboratory and be warranted by the manufacturer to produce at least 80% of rated output after twenty years of operation.

(G) Inverters and charge controllers must be certified for safety by a Nationally Recognized Testing Laboratory and be warranted by the manufacturer against failure due to materials and workmanship for at least five years.

(F) All solar PV energy systems must be designed and installed consistent with the National Electric Code Article 690.

(G) Grid connected systems must meet all interconnection standards of the local electrical utility and must include with an application for a residential or commercial tax credit a copy of an interconnection or net metering agreement with the local electrical utility.

(H) The costs of system performance monitoring hardware and software are not eligible for residential or commercial tax credits. Grid connected backup power and monitoring systems such as Grid Point back-up power systems are not eligible for the tax credit with the exception that the inverter within such systems which will be considered to carry a cost \$2,500 for the purpose of calculating the tax credit.

(I) In order to be eligible for a residential or commercial tax credit, the taxpayer applicant must demonstrate that a solar PV energy system has been sited and installed appropriately. Specifically, the system should be:

1. Located such that the solar modules are completely free of shade from trees and other plants, buildings, chimneys, vent pipes, utility poles, and other objects that would reduce system output for at least two-thirds of the daylight hours at the site;

2. Positioned so as to optimize the average annual solar radiation values (kWh/M<sup>2</sup>/day). Guidance for siting may be found at the the National Renewable Energy Laboratory's (NREL) National Solar Radiation Database (found at: <http://tredc.nrel.gov/solar/pubs/redbook/PDFs/UT.PDF>);

3. Module and/or array tilt for fixed collectors shall be angled no greater than +/-15 degrees from the energy system site's geographic latitude;

4. Positioned such that fixed modules and/or arrays are oriented within 15 degrees of true south.

(J) In order to be eligible for a residential or commercial tax credit, a solar PV energy system must be certified for safety by one of the following:

1. A Utah licensed electrical contractor (S200);

2. A Utah licensed solar photovoltaic contractor (S215);

3. A licensed contractor who has obtained written approval by the Utah Department of Occupational Licensing for the installation of solar PV systems; or

4. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required on the tax credit application.

(K) For purposes of computing eligible costs for residential and commercial tax credits, the reasonable cost of a solar PV energy system that is grid connected or that provides electricity to a building or structure that is one quarter mile or less from a power distribution line operated by a retail electric utility provider is considered to be no higher than \$10 per watt of rated output capacity for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility).

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$10 per watt of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = ((\$10 x rated output capacity in watts) - rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$10 per watt, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = ((\$10 x rated output capacity in watts) - rebates) x 0.10

(L) For purposes of computing eligible costs for residential and commercial tax credits, the reasonable cost of solar PV energy system that is not grid connected and that provides electricity to a building or structure that is more than one quarter mile from a power distribution line operated by a retail electric utility provider is considered to be no higher than \$13 per watt of rated output capacity for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility).

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$13 per watt of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = ((\$13 x rated output capacity in watts) - rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$13 per watt, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = ((\$13 x rated output capacity in watts) - rebates) x 0.10

#### **R638-2-8. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Passive Solar.**

(A) An eligible passive solar system must be purposefully designed to use the structure of a building to collect, store, and distribute heating or cooling to a building and to do so at the appropriate season and time of day. (For example providing heat in winter or at night but not during summer days.) All passive solar systems should contain the following in order to be eligible:

1. A means to allow the solar energy to enter the system;

2. A heat-absorbing surface;

3. A thermal storage mass located within the conditioned space;

4. A heat transferral system or mechanism and;

5. Protection from summer overheating and excessive winter heat-loss.

A passive system must receive an average of at least four hours of sunlight per day during the winter months of December through March and shall be primarily south facing.

(B) Eligible costs for a passive solar system include the costs of the following:

1. Trombe wall;

2. Water wall;
3. Thermosyphon;
4. Equipment or building shell components providing direct heat gain; and
5. Any item that can be demonstrated to be a component of a purpose-built system to collect, store and transport heat from the sun. The cost of ventilation, fans, movable insulation, louvers, overhangs and other shading devices shall be eligible provided that they are designed to be used as an integral part of the passive solar system and not part of the conventional building design.

(C) The cost of a solarium is also considered to be eligible if it provides heat to the living space of the house in conjunction with a thermal storage mass and a forced or natural convection heat transportation design. Solariums must also be designed to prevent heat loss at night by means of insulation devices. They must also be designed so as to prevent summer heating that would increase the load on the building's cooling system.

(D) The cost of windows and other glazing devices are eligible only when they are part of a passive solar system that uses thermal mass storage and a passive or active heat transportation system to provide heating throughout the building. In addition, windows and other glazing devices are eligible only when they are oriented within 30 degrees of true south and when they are installed with shading devices or overhangs that prevent direct sun from entering the building in the summer while allowing direct sun in the winter. Windows and other glazing devices must also carry solar heat gain coefficient (SHGC) ratings of 0.50 or higher in order to allow sufficient amounts of heat into the building, but must carry a U-factor rating of 0.35 or less in order to provide sufficient insulation to the building.

(E) The cost of heat transportation systems shall be eligible provided they are part of the passive solar design and will not be used as part of a conventional heating system.

(F) Costs for the thermal storage mass of a passive solar system are eligible subject to the following:

1. For a non-loaded structure, 100% of the cost may be eligible;
2. For a loaded structure, 50% of the cost may be eligible;
3. Notwithstanding (1) and (2) above, the cost of thermal storage mass may not exceed 30% of the total system cost against which a tax credit calculated.

(G) No tax credit shall be given if USEP concludes that the passive solar system does not supply heating when needed or allows more heat loss than gain in the winter months or overheating in the summer months.

#### **R638-2-9. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Wind.**

(A) All eligible costs for wind energy systems must conform with Section R638-2-5, above. Wind energy systems must also meet the requirements in this Section.

(B) Wind systems of 50 kilowatts generating capacity or less must include a wind turbine that is either:

1. Listed as eligible under the California Emerging Renewables Program in order to be eligible for a Utah commercial or residential tax credit. This list may be found at the following site: [http://www.consumerenergycenter.org/cgi-bin/eligible\\_smallwind.cgi](http://www.consumerenergycenter.org/cgi-bin/eligible_smallwind.cgi); or
2. The applicant can demonstrate to USEP that the turbine meets standards that are equivalent to those of the California Emerging Renewables Program as of calendar year 2007.

(C) Inverters and charge controllers must be certified for safety by a Nationally Recognized Testing Laboratory as meeting

Underwriters Laboratory Standard 1741.

(D) All wind energy systems must be designed and installed consistent with the National Electric Code. Grid connected systems must also meet all interconnection standards of the local electrical utility. Applications for residential or commercial tax credits for grid connected systems must include a copy of an interconnection or net metering agreement with the local electrical utility.

(E) In order to be eligible for a residential or commercial tax credit, the taxpayer applicant must demonstrate that a wind energy system has been sited and installed appropriately. Specifically, the system should be:

1. Installed such that the central tower or pole upon which the turbine is mounted is located a distance at least equal to one and one-half times the height of the tower or pole from any:

- a. Buildings;
- b. Utility poles or overhead utility lines;
- c. Fences, roads, or other structures outside of the boundaries of the taxpayer's property.

2. Installed such that wind flowing to the system is not obstructed or airflow diminished or turbulence created by nearby:

- a. Trees or other vegetation;
- b. Buildings and other structures;
- c. Hills, cliffs, or other topographical obstructions.

The photographs included with a wind energy system should include views of the system from all angles such that SEP can verify appropriate siting. SEP also reserves the right to conduct a site visit to verify appropriate siting.

(F) Wind turbines mounted on buildings are not eligible unless it can be demonstrated by a professional engineer that the building's soundness and structural integrity are not compromised by the wind energy system and that the attachments of the system to the building are sufficient to withstand the most extreme local weather conditions.

(G) Wind energy systems must include lightning protection to be eligible for residential or commercial tax credits.

(H) Wind turbines must be covered by a manufacturer's warranty that guarantees against defects in design, material, and workmanship for at least five years after installation under normal use in a wind energy system.

(I) In order to be eligible for a residential or commercial tax credit, a wind energy system must comply with all local building or zoning ordinances. Copies of any required permits should be included with the tax credit application.

(J) In order to be eligible for a residential or commercial tax credit, a wind energy system must be certified for electrical safety by either:

1. A professional electrician licensed by the State of Utah;
2. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required with the tax credit application.

(K) For purposes of computing eligible costs for residential and commercial tax credits, the reasonable cost of a wind energy system is considered to be no higher than \$5 per watt of rated output capacity for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility).

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$5 per watt of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = ((\$5 x rated output capacity in watts) -

rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$5 per watt, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = (( $\$5 \times$  rated output capacity in watts) - rebates) x 0.10

**R638-2-10. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Geothermal Heat Pumps.**

(A) All eligible costs for geothermal heat pump systems must conform with Section R638-2-5, above. Geothermal heat pump systems must also meet the requirements in this Section.

(B) In order to be eligible for residential or commercial tax credits, a geothermal heat pump system employed to heat and/or cool a building must derive at least 75% the heating and cooling from the ground. Systems that provide more than an insignificant amount of energy to the building using combustion, cooling towers, air-source heat pumps, or any other mechanism not involving thermal ground coupling are not eligible.

(C) In order to be eligible for residential or commercial tax credits, a geothermal heat pump system must conform with the design and practice guidelines described in the American Society of Heating, Refrigerating, and Air Conditioning Engineers' (ASHRAE) Applications Handbook, Chapter 32.

(D) In order to be eligible for residential or commercial tax credits, a geothermal heat pump system must have been designed by either:

1. A professional engineer licensed in Utah;
2. A person designated as a "Certified GeoExchange Designer" by the Association of Energy Engineers; or
3. A person designated as a "Certified Energy Manager" by the Association of Energy Engineers.

Proof of designer qualification may be required on the tax credit application.

(E) In order to be eligible for residential or commercial tax credits, a geothermal heat pump system must have been installed by a plumber licensed in the State of Utah or by an installer certified by the International Ground Source Heat Pump Association (IGSHPA). Proof of installer qualification may be required on the tax credit application.

(F) In the case of a system using a vertical bore (either ground source or water source), drilling must be performed by a water well driller licensed by the Utah Division of Water Rights. Wells drilled for a vertical bore must also obtain a provisional well approval from the Utah Division of Water Rights, Department of Natural Resources. Proof of driller qualifications and well approval may be required on the tax credit application.

(G) Costs incurred for the drilling of wells or excavating trenches are eligible if actually used within the final system for the exchange of heat with the ground. The cost of exploratory wells or trenches that are not used within the final system are not eligible.

(H) Design costs for a geothermal heat pump system are eligible but only for the components of the system that would not normally be associated with a conventional heating and air conditioning system. Tax credit applications should separate design costs for the geothermal and conventional components of the system.

(I) For closed loop systems (both ground source and water source), the heat exchanging pipe loop shall be warranted by the installer against leakage or breakage for not less than three years from the date of installation.

(J) For purposes of computing eligible costs for residential and commercial tax credits, the reasonable cost of a geothermal heat pump system is considered to be no higher than \$4,000 per ton of output capacity for all eligible costs listed above and in Section R638-2-5 and prior to any cash rebates or incentives that the taxpayer may receive from a third party (such as a utility).

1. For a residential tax credit application with total pre-rebate eligible costs exceeding \$4,000 per ton of capacity, the amount of the tax credit shall be calculated as follows:

Tax credit granted = (( $\$4,000 \times$  rated output capacity in tons) - rebates) x 0.25

2. For a commercial tax credit application with total eligible costs exceeding \$4,000 per ton, the amount of the tax credit shall be calculated as 10% of costs calculated as follows:

Tax credit granted = (( $\$4,000 \times$  rated output capacity in tons) - rebates) x 0.10

3. If the cost of a geothermal heat pump system exceeds \$4,000 per ton of capacity due to unusual and/or unavoidable circumstances (such as poor soil or drilling conditions) the taxpayer applicant may request that the reasonable cost limitation above be waived by USEP. In order to do so, the applicant must provide written documentation and explanation from the designer or installer of the system as to why the final system cost exceeded this limit. Granting of such a waiver will be at the discretion of USEP and UGS after investigation as to the validity of the waiver claim.

**R638-2-11. Investment Tax Credit, Eligible Costs for Commercial Systems and Residential Systems, Geothermal Electricity.**

(A) All eligible costs for geothermal electric systems must conform with Section R638-2-5, above. Geothermal electric systems must also meet the requirements in this Section.

(B) Eligible equipment costs for a geothermal electrical system are limited to components up to the point of interconnection with AC service when powering a building, or up to the point of interconnection with the electrical grid for system intended solely for the sale of power. Eligible equipment costs include production and injection wells and well casings, wellhead pumps, and turbine generators. In addition, flash tanks (flash steam systems), heat exchangers (binary cycle systems), condensers, cooling towers, associated wiring and disconnects, and associated pumps are eligible.

(C) Design costs for a geothermal electrical system are eligible but only for the cost of integrating the eligible components of the system that are listed in (B) above. Tax credit applications should separate design costs for the geothermal and conventional components of the system.

(D) Costs for studies to characterize a geothermal resource are eligible so long as a final system using the geothermal resource is build and placed into operation.

(E) Costs incurred for the drilling of wells are eligible if such wells are actually used (whether for withdrawal or reinjection of water) within the final geothermal electrical system. The cost of exploratory wells that are not used within the final system are not eligible.

(F) In the case of a system that includes any well greater than 30 feet in depth, any drilling must be performed by a water well driller licensed by the Utah Division of Water Rights. All such wells, whether water is returned to the ground through a recharge well or used or discharged at the surface, require an approved water right certification issued by the Utah state engineer in the Division of

Water Rights, Department of Natural Resources. Proof of driller qualifications and well right may be required on the tax credit application.

(G) In order to be eligible for residential or commercial tax credits, a geothermal heat pump system must have been designed by either:

1. A professional engineer licensed in Utah; or
2. A person designated as a "Certified Energy Manager" by the Association of Energy Engineers.

Proof of designer qualification may be required on the tax credit application.

(H) In order to be eligible for a residential or commercial tax credit, a geothermal electricity system must be certified for safety by either:

1. A professional electrician licensed by the State of Utah;
2. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required with the tax credit application.

**R638-2-12. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Direct Use Geothermal.**

(A) All eligible costs for direct use geothermal systems must conform with Section R638-2-5, above. Direct use geothermal systems must also meet the requirements in this Section.

(B) Eligible costs for a direct use geothermal system are limited to components that would not normally be associated with a conventional hot water heating system. Eligible equipment costs include wells and well casings, wellhead pumps, and heat exchangers where well water is not directly used within a building or a manufacturer's heating system. Equipment and components beyond the wellhead or, where applicable, a heat exchanger, are not eligible. However, water treatment equipment that would permit the direct use of well water within a heating system, is considered eligible.

(C) Design costs for a direct use geothermal system are eligible but only for the components of the system that would not normally be associated with a conventional hot water heating system. Tax credit applications should separate design costs for the geothermal and conventional components of the system.

(D) Costs for studies to characterize a geothermal resource are eligible so long as a final system using the geothermal resource is build and placed into operation.

(E) Costs incurred for the drilling of wells are eligible if such wells are actually used (whether for withdrawal or reinjection of water) within the final direct use geothermal system. The cost of exploratory wells that are not used within the final system are not eligible.

(F) In the case of a system that includes any well greater than 30 feet in depth, any drilling must be performed by a water well driller licensed by the Utah Division of Water Rights. All such wells, whether water is returned to the ground through a recharge well or used or discharged at the surface, require an approved water right certification issued by the Utah state engineer in the Division of Water Rights, Department of Natural Resources. Proof of driller qualifications and well right may be required on the tax credit application.

**R638-2-13. Eligible Costs for Commercial and Residential Systems, Hydroenergy.**

(A) All eligible costs for hydroenergy systems must conform

with Section R638-2-5, above. Hydroenergy systems must also meet the requirements in this Section.

(B) Eligible equipment costs for a geothermal electrical system are limited to components up to the point of interconnection with AC service when powering a building, or up to the point of interconnection with the electrical grid for systems intended solely for the sale of power. The costs of the following hydroenergy system components are eligible for residential or commercial tax credits:

1. Turbine;
2. Generator;
3. Rectifier;
4. Inverter;
5. Penstocks;
6. Penstock ventilation;
7. Buck and boost transformer;
8. Valves;
9. Drains;
10. Diversion structures (with the exception of storage dams, fish facilities, and canals);
11. Screened intake device; and
12. Wiring and disconnects from generator to the inverter and from the inverter to the point of interconnection with the AC panel.

(C) The costs of additional components of hydroenergy systems are eligible for residential or commercial tax credits if the hydroenergy system is not grid connected and it provides electricity to a building or structure that is more than one quarter mile from a power distribution line operated by a retail electric utility provider. If these conditions are met, the following components are also eligible:

1. Batteries and necessary wiring and disconnects;
2. Battery temperature sensors;
3. Charge controller and necessary wiring and disconnects;
4. Electric load governor and necessary wiring and disconnects.

(D) In order to be eligible for a residential or commercial tax credit, a geothermal electricity system must be certified for safety by either:

1. A professional electrician licensed by the State of Utah;
2. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required with the tax credit application.

**R638-2-14. Investment Tax Credit, Eligible Costs for Commercial and Residential Systems, Biomass.**

(A) All eligible costs for biomass systems must conform with Section R638-2-5, above. Biomass systems must also meet the requirements in this Section.

(B) Eligible costs for biomass systems do not include the cost of equipment or labor for the growing or harvesting of biomass materials, nor the storage of biomass materials at a location separate from the facility at which electricity or fuel will be produced. It also does not include the cost of transporting biomass materials to the facility where electricity or fuel will be produced.

(C) For biomass systems that produce fuels, eligible system costs include the costs of equipment to receive, handle, collect, condition, store, process, and convert biomass materials into fuels at the processing site.

(D) For biomass systems that that use biomass as the sole fuel for producing electricity, the following are eligible equipment costs:

1. Systems for collecting and transporting methane from a digester or landfill;

2. On-site systems or facilities for collecting biomass that will be used in a digester or boiler;

3. Equipment necessary to prepare biomass for use as a fuel (e.g. driers, chippers);

4. Engines or turbines used to power generators;

5. Generators;

6. Inverters;

7. Wiring and disconnects from the generator to the inverter and from the inverter to the point of interconnection with the AC panel.

(F) Grid connected systems must meet all interconnection standards of the local electrical utility and must include with an application for a residential or commercial tax credit a copy of an interconnection or net metering agreement with the local electrical utility.

(G) In order to be eligible for residential or commercial tax credits, a biomass system that produces electricity must have been designed by either:

1. A professional engineer licensed in Utah; or

2. A person designated as a "Certified Energy Manager" by the Association of Energy Engineers.

Proof of designer qualification may be required on the tax credit application.

(H) In order to be eligible for a residential or commercial tax credit, a biomass system must be certified for safety by either:

1. A professional electrician licensed by the State of Utah;

2. A county or municipal building inspector licensed by the State of Utah.

Proof of this certification may be required with the tax credit application.

#### **R638-2-15. Certification of Production Tax Credit Eligibility.**

(A) Businesses seeking to claim production tax credits must first apply to USEP for certification that a commercial energy system has been installed, is a viable energy production system, and meets all other requirements of Section 59-7-614. Such certification shall be sought within the first six months of the system being placed into commercial service.

(B) Eligibility for production tax credits is limited to commercial energy systems that are also any of the following:

1. Biomass systems;

2. Wind energy systems; or

3. Geothermal electricity systems.

In addition, the name plate capacity of any system seeking production tax credits must be 660 kilowatts or greater. Electricity produced by the system must either be used by the business seeking a production tax credit or sold in order to be eligible for credits.

(C) Businesses may request certification by providing the following to USEP:

1. A written request for certification of a commercial energy system for eligibility to receive a production tax credit;

2. Information about the company seeking certification, including legal name, type of legal entity, address, telephone number, and the name and telephone number of a contact person regarding the request;

3. A description of the commercial energy system including the type of facility, total nameplate capacity, the methods to be used to produce fuel or electricity, and a list of major fuel or electricity producing components. Systems generating electricity should also

provide the number, manufacturer, and model number of generating turbines to be used;

4. Information on the location of the commercial energy system sufficient to permit site inspection by USEP staff. For wind farms this should include a map of the turbine layout. For geothermal systems this should include a map showing production and injection wells along with the location of the generating turbine or turbines;

5. Photographs of key and/or representative components of the commercial energy system;

6. Projected annual electricity production in kilowatt hours for the commercial energy system once it has entered commercial service;

7. The date on which the commercial energy system entered or is expected to enter commercial service.

(D) A business requesting certification for production tax credits must also include with its request information on ownership of the commercial energy system. If the business seeking tax credit certification leases the commercial energy system, it must provide with its request evidence that the lessor of the system has irrevocably elected not to claim production tax credits for the system.

(E) If a business plans to claim production tax credits for electricity that is used and not sold, it must install a separate metering system to measure the electricity production of the commercial energy system. Such metering should be unidirectional, tamperproof, and should measure only the electricity production attributable to the commercial energy system. The meter must also measure net electricity from the system (i.e. gross electricity from the generator minus any electricity used to operate the system itself).

(F) Upon receipt of a request for certification, USEP staff will assess whether the commercial energy system applying for production tax credit certification is a viable system and whether the system has been completely installed. USEP may request that a field inspection take place to verify information in the certification request and to ensure that the system conforms with the requirements of Section 59-7-614 and with this rule.

(G) USEP will respond to a request for certification of eligibility for production tax credits within sixty days of receipt. However, if incomplete information is received or permission for field inspection has not been granted after sixty days, USEP will have an additional 30 days after receipt of complete information and/or field inspection to respond positively or negatively to a certification request.

(H) Consistent with Title 63, Chapter 46b (Administrative Procedures Act), upon its decision to grant or deny a certification request, USEP will inform the requesting company in writing of its decision. A copy of the written decision will also be provided to the Utah State Commission in order to document the company's eligibility to claim production tax credits on future tax returns.

#### **R638-2-16. Granting of Production Tax Credits.**

(A) In order for a company to claim production tax credits on its Utah corporate income tax return, USEP must first validate the amount of tax credits the company may claim for each commercial energy system. In order to claims to be validated, the company must submit to USEP information regarding the following:

1. The date that the commercial energy system first entered commercial service;

2. The beginning and ending dates of the company's tax year;

3. The number of kilowatt hours produced by the system that

were sold or used during the company's tax year and that were also used or sold within the system's production tax credit window.

All such information will be provided on a standard claim form created by USEP.

(B) For purposes of validating the number of kilowatt hours sold, the company should also submit to USEP invoices or other information that documents that number of kilowatt hours of electricity sold.

(C) For purposes of validating the number of kilowatt hours produced and used, the company should submit monthly readings from the meter used to measure the net output of the commercial energy system. USEP will retain the right to site inspect the system and meter to validate that the readings provided are true and accurate.

(D) Once it has received a production tax credit claim from a company, USEP will make a determination as to:

1. Whether the information provided conforms with this rule and is complete;

2. Whether the number of kilowatt hours claimed appears to be feasible and accurate;

3. The number of kilowatts deemed to be validate;

4. The amount of tax credit that the company may claim on its corporate income tax return. This amount will equal 0.35 cents per each validated kilowatt hour of electricity used or sold during the company's tax year and within the systems production tax credit window.

(E) Once USEP has received complete information necessary to validate a production tax credit claim, it will provide to the company a completed validation form (to be created by either USEP or the Utah State Tax Commission) within thirty days. The form will specify the validated number of kilowatt hours that are eligible for credit and the amount (in dollars) of production tax credits that the company may claim for the commercial energy system for that tax year.

(F) If USEP denies, in whole or in part, an application for a tax credit, the taxpayer applicant may, consistent with Section 63-46b-12 (Administrative Procedures Act), request that the decision be reviewed by the USEP manager. If, after review by the manager, the taxpayer desires a further appeal, he or she may request reconsideration of the decision by the director of UGS, consistent with Section 63-46b-13.

**KEY: energy, renewable, tax credits, solar**

**Date of Enactment or Last Substantive Amendment: 2007**

**Authorizing, and Implemented or Interpreted Law: 59-7-614; 59-10-1014; 59-10-1106**

▼ ————— ▼

**Natural Resources, Parks and  
Recreation  
R651-201  
Definitions**

**NOTICE OF PROPOSED RULE**

(Amendment)

DAR FILE NO.: 30025

FILED: 06/04/2007, 07:38

**RULE ANALYSIS**

**PURPOSE OF THE RULE OR REASON FOR THE CHANGE:** The purpose of this amendment is to add more definitions commonly used, but not defined throughout the boating community of recreators. Items such as "good and serviceable condition", "immediately available", or "readily accessible" are now defined for those who boat on the waters of Utah.

**SUMMARY OF THE RULE OR CHANGE:** By adding new and more defined definitions, it will assist the public to understand more fully what is expected and what is meant by some of the boating terms used in Utah.

**STATE STATUTORY OR CONSTITUTIONAL AUTHORIZATION FOR THIS RULE:** Title 73, Chapter 18

**ANTICIPATED COST OR SAVINGS TO:**

❖ **THE STATE BUDGET:** Since these are definitions only, there will be no aggregate anticipated cost or savings to the state budget.

❖ **LOCAL GOVERNMENTS:** There are no anticipated cost or savings to local government, as these are definitions only and carry no monetary value or requirement.

❖ **OTHER PERSONS:** Defines how required equipment should be maintained and what it means to maintain all the boating equipment properly. The only possible cost would be if a boater replaced or repaired a personal flotation device (PFD) as defined in this section. That cost would be nominal.

**COMPLIANCE COSTS FOR AFFECTED PERSONS:** Those replacing or updating their equipment would pay to have such equipment repaired or replaced.

**COMMENTS BY THE DEPARTMENT HEAD ON THE FISCAL IMPACT THE RULE MAY HAVE ON BUSINESSES:** Any fiscal impact should be negligible. Michael Styler, Executive Director

**THE FULL TEXT OF THIS RULE MAY BE INSPECTED, DURING REGULAR BUSINESS HOURS, AT:**

NATURAL RESOURCES  
PARKS AND RECREATION  
Room 116  
1594 W NORTH TEMPLE  
SALT LAKE CITY UT 84116-3154, or  
at the Division of Administrative Rules.

**DIRECT QUESTIONS REGARDING THIS RULE TO:**

Dee Guess at the above address, by phone at 801-538-7320, by FAX at 801-537-3144, or by Internet E-mail at deeguess@utah.gov

**INTERESTED PERSONS MAY PRESENT THEIR VIEWS ON THIS RULE BY SUBMITTING WRITTEN COMMENTS TO THE ADDRESS ABOVE NO LATER THAN 5:00 PM on 07/31/2007.**

**THIS RULE MAY BECOME EFFECTIVE ON: 08/07/2007**

**AUTHORIZED BY: Mary Tullius, Director**